CLAIMS:

Having thus described our invention, what we claim as new, and desire to secure by

Letters Patent is:

1   1. A method for automatically launching an application in a computing

2   device by authenticating a user via a digital camera associated with said computing

3   device, said method comprising:

4   (a) obtaining a digital representation of said user via said digital camera;

5   (b) filtering said digital representation with an digital edge detection

6   algorithm to produce a resulting digital image;

7   (c) comparing said resulting digital image to a pre-stored digital image of

8   said user;

9   (d) retrieving user information including an application to be launched in

10   response to a successful comparison result, said user information being associated with

11   said pre-stored digital image of said user; and

12   (e) launching said application.

1   2. The method according to Claim 1, further comprising a step of: aligning

2   said user in relation to said computing device for obtaining a digital representation of said

3   user.

1   3. The method according to Claim 1, further comprising a step of:

2   centering said resulting image with respect to a frame provided in said computing device.

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1   4. The method according to Claim 1, said comparing step further

2   comprising a step of: sliding vertical and horizontal edges of said resulting image over

3   said pre-stored image for enabling said comparing.

1   5. The method according to Claim 1, wherein said resulting image and

2   said pre-stored image for said user are binary matrices.

1   6. The method according Claim 1, wherein said comparing step utilizes an

2   approximation filter to improve comparing of the resulting image with the pre-stored

3   image.

1   7. The method according to Claim 1, wherein said pre-stored digital image

2   of said user is stored in a database on said computing device.

1   8. The method according to Claim 1, wherein said application is an e-mail

2   client.

1   9. The method according to 8, said launching step further comprising a

2   step of: logging into said e-mail client by utilizing user information including username

3   and password associated with said user.

1   10. The method according to 8, further comprising a step of:

2   automatically retrieving one or more e-mail messages from said e-mail

3   client for said user; and

4   displaying said one or more e-mail messages to said user via a display.

1   11. The method according to Claim 1, further comprising a step of:

2   sensing said user in proximity to said computing device for obtaining said digital

3   representation of said user.

1   12. The method according to Claim 1, wherein said user interacts via an

2   interface with sad computing device for obtaining said digital representation of said user.

1   13. The method according to Claim 1, wherein said pre-stored digital

2   image for said user is obtained from a pre-existing digital representation of said user

3   filtered by an edge detection algorithm.

1   14. The method according to Claim 1, wherein said edge detection

2   algorithm is a one bit per pixel edge detection algorithm.

1   15. The method according to Claim 14, wherein said one bit per pixel edge

2   detection algorithm is a Sobel operator.

1   16. The method according to Claim 1, wherein said filtering step further

2   comprises a step of: filtering said resulting digital image with a second edge detection

3   algorithm which is selected from the group consisting of: a Laplacian filter; and a

4   Gaussian filter.

1   17. The method according to Claim 1, wherein in response to said

2   successful match, user information corresponding to said user including user's name is

3   displayed to said user on a visual display.

1   18. The method according to Claim 1, wherein if no match is found for

2   said user, said method further comprising the steps of:

3   prompting said user to enter user information associated with said pre-

4   stored image of said user; and

5   launching said application in response to a successful match of entered

6   user information to user information associated with said pre-stored image of said user.

1   19. The method according to Claim 1, said method further comprising a

2   step of: updating said pre-stored digital image of said user by merging said pre-stored

3   digital image with said resulting digital image to generate a composite image.

1   20. The method according to Claim 19, wherein said composite image is

2   generated by taking an arithmetical mean of said pre-stored digital image and said

3   resulting digital image.

1   21. The method as claimed in Claim 19, further comprising a step of:

2   processing said composite image with a least squares algorithm for improving definition

3   of edges in said composite image.

1   22. The method according to Claim 1, further comprising a step of:

2   prompting said user to confirm user information associated with said pre-

3   stored digital image in response to said successful match of said user.

1   23. A system for automatically launching an application in a computing

2   device by authenticating a user via a digital camera associated with said computing

3   device, said method comprising:

4   (a) a mechanism for obtaining a digital representation of said user via said

5   digital camera;

6   (b) a mechanism for filtering said digital representation with an digital

7   edge detection algorithm to produce a resulting digital image;

8   (c) a mechanism for comparing said resulting digital image to a pre-stored

9   digital image of said user; and

10   (d) a mechanism for retrieving user information including an application

11   to be launched in response to a successful comparison result, said user information being

12   associated with said pre-stored digital image of said user; and

13   (e) a mechanism for launching said application.

1   24. The system according to Claim 23, wherein said computing device is

2 connected to a communications network.

1   25. The system according to Claim 23, wherein said computing device is

2 incorporated into a household appliance or a security appliance.

1   26. The system according to Claim 23, wherein said application is an e-

2 mail client.

1   27. The method according to Claim 23, further comprising a mechanism

2 for aligning said user in relation to said computing device for obtaining a digital

3 representation of said user.

1   28. The method according to Claim 23, further comprising a mechanism

2 for centering said resulting image with respect to a frame provided in said computing

3 device.

1   29. The system according to Claim 23, further comprising a mechanism

2 for logging into said e-mail client by utilizing username and password associated with

3 said user.

1   30. The system according to Claim 23, said system further comprising:

2   a mechanism for retrieving one or more e-mail messages from said e-mail

3 client for said user in response to launching of said e-mail client; and

4   a mechanism for displaying said one or more e-mail messages to said user

5 via a display.

1   31. The method according to Claim 23, further comprising a mechanism

2 for sensing said user in proximity to said computing device for obtaining said digital

3 representation of said user.

1   32. The system according to Claim 23, wherein if no match is found for

2 said user, said system further comprising:

3   a mechanism for prompting said user to enter user information associated

4 with said pre-stored image of said user; and

5   a mechanism for launching said application in response to a successful

6 match of entered user information to user information associated with said pre-stored

7 image of said user.

1   33. The system according to Claim 23, said system further comprising:

2   a mechanism for updating said pre-stored digital image of said user by

3 merging said pre-stored digital image with said resulting digital image into a composite

4 image.

1   34. A program storage device readable by a machine, tangibly embodying

2   a program of instructions, executable by said machine to perform method steps for

3   automatically launching an application in a computing device by authenticating a user via

4   a digital camera associated with said computing device, said method steps comprising:

5   (a) obtaining a digital representation of said user via said digital camera;

6   (b) filtering said digital representation with an digital edge detection

7   algorithm to produce a resulting digital image;

8   (c) comparing said resulting digital image to a pre-stored digital image of

9   said user;

10   (d) retrieving user information including an application to be launched in

11   response to a successful comparison result, said user information being associated with

12   said pre-stored digital image of said user; and

13   (e) launching said application.